

FORM PTO-1590 (REV 10-2000)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTORNEY'S DOCKET NUMBER MOE 209	
TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371				U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 09/719466	
INTERNATIONAL APPLICATION NO. PCT/EP00/02612		INTERNATIONAL FILING DATE 24 MARCH 2000		PRIORITY DATE CLAIMED 12 APRIL 1999	
TITLE OF INVENTION PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES, ESPECIALLY DRIVER MODULES					
APPLICANT(S) FOR DO/EO/US DIRK TILLENBURG					

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

- ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.
- ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.
- ☐ This is an express request to promptly begin national examination procedures (35 U.S.C. 371(f)).
- ☐ The US has been elected by the expiration of 19 months from the priority date (PCT Article 31).
- ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - ☒ is attached hereto (required only if not communicated by the International Bureau).
 - ☐ has been communicated by the International Bureau.
 - ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
- ☒ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
- ☐ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - ☐ are attached hereto (required only if not communicated by the International Bureau).
 - ☐ have been communicated by the International Bureau.
 - ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - ☐ have not been made and will not be made.
- ☐ An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
- ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
- ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 16 below concern document(s) or information included:

- ☐ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.
- ☒ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.
- ☒ A **FIRST** preliminary amendment.
☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.
- ☐ A substitute specification.
- ☐ A change of power of attorney and/or address letter.
- ☒ Other items or information:
 - (X) REQUEST TO ACCEPT PATENT APPL. FOR ENTERING
US NATIONAL PHASE**
 - (X) CLAIM OF PRIORITY**
 - (X) FORM PTO-1449**
 - (X) INT. SEARCH REPORT AND REFERENCES CITED
THEREIN**

Form PTO-1390 (REV 10-2000) page 2 of 2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dirk Tillenburg
Serial No:
Filing Date:
Title: PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES,
ESPECIALLY DRIVER MODULES
Examiner:

Art Unit:

Priority application: Country: Germany
Priority application number: 199 16 321.9
Priority date: 12 April 1999

PCT Application no: PCT/EP00/02612
PCT Application filing date: 24 March 2000

December 12, 2000

MOE209R1

REQUEST TO ACCEPT PATENT APPLICATION FOR ENTERING UNITED
STATES NATIONAL PHASE UNDER 35 USC §371

Hon. Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

SIR:

A patent application related to the above identified application was filed on 24 March 2000 under the PCT Treaty under the docket number PCT/EP00/02612.

An English translation of the originally filed PCT application PCT/EP00/02612 is enclosed with this filing. A certificate of accurate translation into the English language is enclosed.

This submission is intended to result in complete fulfillment of any requirements necessary to enter the U.S.

PCT/EP00/02612

- 1 -

national phase under the Patent Cooperation Treaty and under 35 U.S.C. §371.

If the documents submitted should be incomplete in any manner, then the undersigned attorney respectfully requests to be informed immediately in order to prevent loss of rights.

It is respectfully requested that the present application be treated as an application filed under the Section 35 U.S.C. §371 for transferring a PCT application PCT/EP00/02612, naming the United States, into the national phase and that the present application be granted any and all benefits and in particular those benefits relating to a priority recognition of prior filings under jurisdiction of treaty members and available under the Patent Cooperation Treaty (Washington Treaty), the Paris Convention Treaty, and under the United States Code based on the filing under the Patent Cooperation Treaty of PCT application PCT/EP00/02612.

If there should be any problems in granting the benefits available under the Patent Cooperation Treaty and/or 35 USC §371 based on such items as incompleteness of application, excessive time delays or defective application papers, then it is alternatively respectfully requested that prior to the expiration through abandonment of a filing


under 35 USC §371 and under charging the required fees from deposit account, the present application be treated as an application and/or continuation application filed at a time required under any one of the sections 35 U.S.C. §111, 35 U.S.C. §363, and/or 35 U.S.C. §365(c) as applicable and that the present application be treated as a continuation or continuation-in-part application of the PCT application PCT/EP00/02612.

Recognition of PCT national phase status or, respectively, continuation or continuation-in-part status under the PCT Treaty and/or of the claimed priority date of 12 April 1999 is respectfully requested for the patent application documents in the above captioned matter.

Respectfully submitted,

Dirk Tillenburg

By:



Horst M. Kasper, h/s attorney
13 Forest Drive, Warren, N.J. 07059
Tel.: (908) 757-2839 Fax: (908) 668-5262
Reg.No. 28559; Docket No.: MOE209

*%ptn:pctnat:1(MOE209R1(Dec. 12, 2000(tm

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dirk Tillenburg
Serial No: Art Unit:
Filing Date:
Title: PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES,
ESPECIALLY DRIVER MODULES

Examiner:

Priority application: Country: Germany
Priority application number: 199 16 321.9
Priority date: 12 April 1999

PCT Application no: PCT/EP00/02612
PCT Application filing date: 24 March 2000

December 12, 2000 MOE209A1

PRELIMINARY AMENDMENT

Hon. Commissioner of Patents and Trademarks
Box PCT
Washington, D.C. 20231

SIR:

This is a preliminary amendment to provide certain corrections in the above captioned patent application. Applicant petitions that, if required, the time for response be extended and the corresponding fee be charged. The Commissioner is hereby authorized to charge any additional fees which may be required to Acct. No. 11-0224. Applicant further respectfully requests that this response be accepted as a bona fide effort to meet any potential response requirements outstanding and due in the above captioned

matter.

Please amend the application as follows:

IN THE CLAIMS:

3. (amended) Protective circuit according to claim 1 [or 2], characterized in that the first and second diodes (D1; D2) are substantially identical.

4. (new) A protective circuit for electronic driver modules comprising
a general supply line for the lower disposed supply potential (GND) in case of proper polarity of the supply voltage in forward direction;
a first feed line (2) connected to the general supply line;
a protective diode disposed in the first feed line (2) to the general supply line (5);
a module (B1);
circuit parts (A1) predisposed to the module (B1);
a second feed line (3) for circuit parts (A1) predisposed to the module (B1);
a first protective diode (D1) having a first cathode and leading with the first cathode to the lower disposed supply

potential (GND) and disposed in the second feed line (3) and fed by the lower disposed supply potential (GND); and a second protective diode (D2) having a second cathode and leading with the second cathode to the lower disposed supply potential (GND) and disposed in the supply connection (4) of the module (B1) and fed by the lower disposed supply potential (GND).

5. (new) The protective circuit according to claim 4 further comprising at least one additional module (B2 B4), wherein a common first protective diode (D1) is furnished in a presence of several modules (B1... B4) and in each case a second protective diode (D21...D24) is coordinated to each module (B1... B4).

6. (new) The protective circuit according to claim 4 further comprising a load capacitor, wherein an output of the module is connected to the neutral conductor through the load capacitor.

7. (new) The protective circuit according to claim 4 further comprising a load resistor wherein an output of the

module is connected to the neutral conductor through the load resistor.

8. (new) The protective circuit according to claim 4 further comprising a capacitor disposed between the supply potential and the neutral conductor.

9. (new) The protective circuit according to claim 4 further comprising a Zener diode disposed between the supply potential and the neutral conductor.

10. (new) The protective circuit according to claim 4 further comprising an electrical connection between the module (B1) and the circuit part (A1).

REMARKS

Claims 1 - 3 were in the case. Claims 3 is being amended. New clams 4 - 10 are being introduced.

The present preliminary amendment is submitted in order to provide clarification of the claim language and in order to eliminate any multiple dependencies of the claims.

Should be there any multiple dependent claims


remaining, such remaining multiple dependent claims are to be deemed as treated as canceled by the applicant.

Entry of the above recited corrections is respectfully requested.

Respectfully submitted,

Dirk Tillenburg

By:



Horst M. Kasper, his attorney
13 Forest Drive, Warren, N.J. 07059
Tel.: (908) 757-2839 Fax: (908) 668-5262
Reg.No. 28559; Docket No.: MOE209

*%pt1\PAMEND(MOE209A1(December 12, 2000(rep/tm-sz

2/PRTS

Inventor:

Dirk Tillenburg

Invention:

PROTECTIVE CIRCUIT FOR ELECTRONIC
MODULES, ESPECIALLY DRIVER MODULES

Horst M. Kasper, his attorney
13 Forest Drive, Warren, N.J. 07059
Tel. (908) 757-2839; Reg.No. 28559
Attorney's Docket No.: MOE209

**TRANSLATION OF INTERNATIONAL
APPLICATION**

Application No.: PCT/EP00/02612
Filed: 24 March 2000

PCT/EP00/02612

PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES, ESPECIALLY DRIVER MODULES

Technical Field

The invention relates to a protective circuit for electronic modules, in particular driver modules, according to the preamble of claim 1.

State of the art

It is generally accepted to employ protective diodes for the protection of electronic components against confusion of the poles of the supply voltage. For this purpose either a protective diode is inserted with proper polarity of the supply voltage in forward conducting direction into the feed line of the higher disposed supply potential (+Ub; Vcc) or into the return line of the lower disposed supply potential (-Ub; GND; 0 V). The load currents of all outputs of the component have to take the path to this protective diode in the first case, wherefore a correspondingly large dimensioned and thus expensive protective diode has to be furnished. This disadvantage does

not occur in the second case, wherefore this disposition of the protective diode is to be preferred.

In connection with electronic components, in particular driver components, sometimes the case occurs that internal resistances exist between the outputs and the supply connection for the lower disposed potential. This lead to a so-called break or rupture of the neutral conductor, that is an interruption of the supply conductor for the lower disposed supply potential, to a parasitic current flow through the supply connection of the component, the internal resistances and the outputs and finally the loads to the lower disposed supply potential. Thus non-defined and unstable voltage levels, that is undesired voltage levels can occur at the outputs of the component, whereby the safety is not assured in case of a break of the neutral conductor.

Presentation of the Invention

Therefore it is an object of the present invention to combine an economic protection against reverse polarity with the protection against a rupture or break of the

neutral conductor.

Starting from a protective circuit of the initially recited kind, the object is accomplished according to the present invention by the characterizing features of the independent claim, while advantageous further development of the invention can be gathered from the dependent claims.

It is effectively prevented by the arrangement according to the present invention of the known protective diode and a further protective diode, that in case of a rupture of a neutral conductor, currents can form through the internal resistances and the external loads. The component remains on the output side in a defined, that is secure state upon a rupture of the supply line for the lower disposed supply potential independent of the state of the input signals.

Only a single first protective diode is required independent of the number of the components concerned.

The use of the same damping diodes reduces the dependence of the circuit arrangement on forward voltages,

forward currents, back blocking voltages, temperature behavior, frequency dependence, and the like in a decisive measure.

Short Description of the Drawings

Further details and advantages of the Invention result from the following embodiment illustrated by way of figures. There is shown in:

Figure 1: a circuit arrangement with a protective circuit according to the present Invention;

Figure 2: a further circuit arrangement with an advantageous further development of the protective circuit according to the present invention.

The circuit arrangement according to Fig. 1 comprises a driver module B1 with four outputs Q1 through Q4, wherein the load resistors R1 through R4 and the load capacitors C1 through C4 are controlled through the outputs Q1 through Q4. The module B1 is controlled through the inputs I1, I2 through In of the module B1 by predisposed

circuit parts formed of a multiple opto-electronic control circuit, as is shown by the example coordinated to the input In. The module B1 and the control circuit A1 are supplied by a supply voltage, wherein the supply voltage is applied between a first feed line 1 for the higher disposed supply potential Vcc and by a second feed line 2 for the lower disposed supply potential GND. A first protective diode D1 is disposed between the second feed line 2 and the third feed line 3 for the control circuit A1 such that the first protective diode D1 is connected to the second feed line 2 through the cathode of the first protective diode D1. A second protective diode D2 is inserted between the supply connection 4 of the module B1 fed by the lower disposed potential GND and the second feed line 2 such that second protective diode D2 is connected to the second feed line 2 through the cathode of the second protective diode D2. In case of a reverse polarity (confusion of polarity) of the supply voltage, the protective diodes D2 and D1 prevent that damaging or, respectively, destroying potentials can pass neither to the supply connection 4 of the module B1 nor to the control circuit A1 through the third feed line 3. The case for the so-called rupture of the neutral connection occurs if an interruption 4 happens, for example by a

rupture of the conductor between the second feed line 2 and the general supply line 5 for neutral conductor GND. In this case, the series connection of the oppositely directed protective diodes D1 and D2 prevents that parasitic currents can flow off through the control circuit A1, the supply connection 4, internal resistances R11 through R14 in the module B1, the outputs Q1 through Q4 and the loads resistances R1 through R4 to the general supply line 5. It is furthermore prevented based on the protective circuit according to the present Invention that oscillations can occur at the outputs Q1 through Q4 based on the dynamic cooperation of the internal resistances R11 through R14 with the load capacitors C1 through C4.

A circuit arrangement with for example four driver modules B1 through B4 and in each case coordinated control circuits A1 through A4 is shown in a simplified way in Fig. 2. In each case a second protective diode D21 through D24 is coordinated to each module B1 through B4. However, only a single, common first protective diode D1 is required for all control circuits A1 through A4 in the common feed line 3 fed by the lower disposed potential neutral GND. Also, this protective circuit containing the protective diodes D1, D21

through D24 presents an effective protection both against confusion of polarity of the supply voltage as well as against a rupture of the neutral conductor between the second feed line 2 and the general supply line 5.

Claims

1. Protective circuit for electronic components, in particular driver modules, with a protective diode disposed in the feed line (2) to the general supply line (5) for the lower disposed supply potential (GND) in case of proper polarity of the supply voltage in forward direction, characterized in that

a first protective diode (D1) leading with its cathode to the lower disposed supply potential (GND) is disposed in the feed line (3) for circuit parts (A1) predisposed to the module (B1) and fed by the lower disposed supply potential (GND), and

a second protective diode (D2) leading with its cathode to the lower disposed supply potential (GND) is disposed in the supply connection (4) of the module (B1) and fed by the lower disposed supply potential (GND).

2. Protective circuit according to claim 1, characterized in that a common first protective diode (D1) is furnished in a presence of several modules (B1... B4) and in each case a second protective diode (D21...D24) is coordinated to each module (B1... B4).

[illegible]

Fig. 1

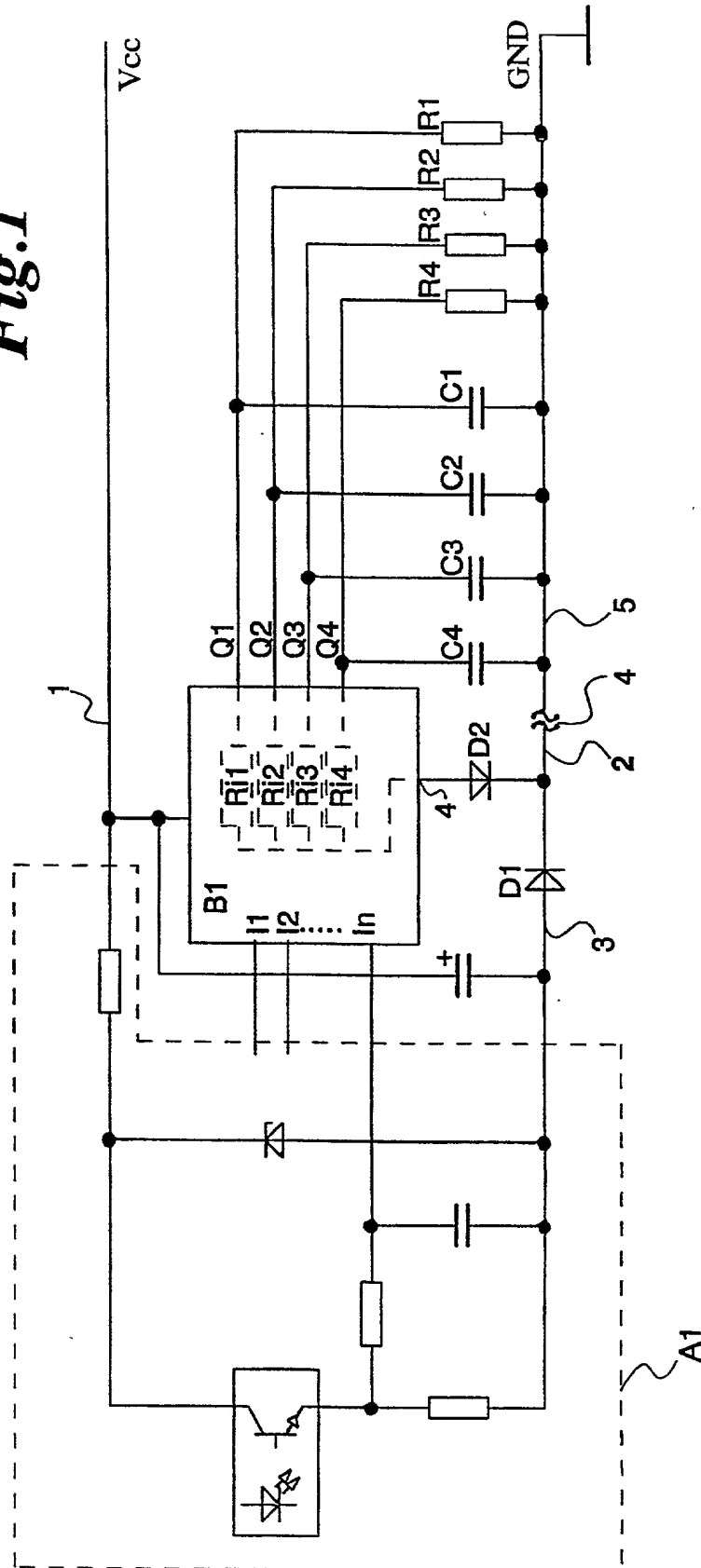
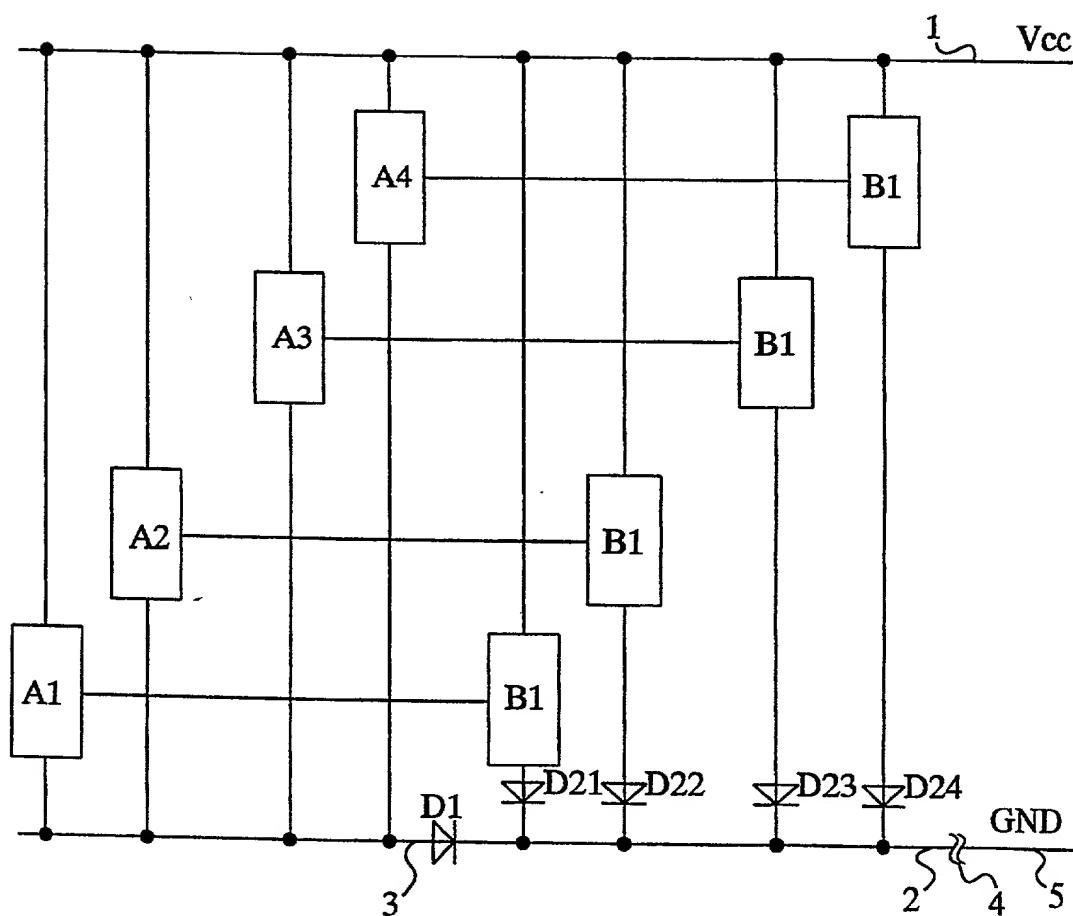


Fig.2

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Dirk Tillenburg

Serial No: **Art Unit:**

Filing Date:

Title: PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES,
ESPECIALLY DRIVER MODULES

DECLARATION AND POWER OF ATTORNEY FOR PATENT APPLICATION

Erklärung Für Patentanmeldungen Mit Vollmacht

German Language Declaration Moe209

Als nachstehend benannter Erfinder erkläre ich hiermit an Eidesstatt:

As a below named inventor, I hereby declare that:

daß mein Wohnsitz, meine Postanschrift und meine Staatsangehörigkeit den im Nachstehenden nach meinem Namen aufgeführten Angaben entsprechen,

My residence, post office address and citizenship are as stated below next to my name,

daß ich, nach bestem Wissen der ursprüngliche, erste und alleinige Erfinder (falls nachstehend nur ein Name angegeben ist) oder ein ursprünglicher, erster und Miterfinder (falls nachstehend mehrere Namen aufgeführt sind) des Gegenstandes bin, für den dieser Antrag gestellt wird und für den ein Patent beantragt wird für die Erfindung mit dem Titel:

Schutzschaltung für elektronische Bausteine, insbesondere Treiberbausteine

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

PROTECTIVE CIRCUIT FOR ELECTRONIC MODULES, ESPECIALLY DRIVER MODULES

deren Beschreibung (nur eines der nachfolgenden Kästchen ankreuzen)

the specification of which (check only one item below)

< > hier beigefügt ist.
is attached hereto.

< > am _____ als U.S.-Anmeldung, Seriennummer _____
 gereicht wurde und am _____ abgeändert wurde (falls
 tatsächlich abgeändert).
 was filed as US Application Serial No. _____
 on _____ and was amended on _____ (if applicable).

<X> am 24. März 2000 als internationale PCT-Anmeldung, Nummer PCT/EP00/02612 eingereicht wurde und am _____ unter PCT-Artikel 34/36 abgeändert wurde (falls tatsächlich abgeändert).
was filed as PCT international application, Number PCT/EP00/02612 on 24 March 2000 and was amended under PCT Article 34/36 on _____ (if applicable)

Ich bestätige hiermit, daß ich den Inhalt der obigen Patentanmeldung einschließlich der Ansprüche durchgesehen und verstanden habe, die eventuell durch einen Zusatzantrag wie oben erwähnt abgeändert wurde.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

Ich erkenne meine Pflicht zur Offenbarung jeglicher Informationen an, die zur Prüfung der Patentfähigkeit in Einklang mit Titel 37, Bundesgesetzbuch (Code of Federal Regulation), § 1.56 von Belang sind.

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56.

Ich beanspruche hiermit ausländische Prioritätsvorteile gemäß Abschnitt 35 der Zivilprozessordnung der Vereinigten Staaten, Paragraph 119 jeglicher unten angegebenen Auslandsanmeldung(en) für ein Patent oder Erfindersurkunde oder jeglicher internationalen PCT-Anmeldung(en), welche mindestens ein Land ausser den Vereinigten Staaten benennt, und habe auch jegliche Auslandsanmeldung(en) für ein Patent oder Erfindersurkunde oder jegliche internationale PCT-Anmeldung(en), welche mindestens ein Land ausser den Vereinigten Staaten benennt, nachstehend

gekennzeichnet, welche von mir für den gleichen Gegenstand eingereicht wurde und ein Anmeldedatum haben, das vor dem Anmeldedatum der Anmeldung liegt, für die Priorität beansprucht wird.

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN /PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 USC 119:

FRÜHERE AUSLÄNDISCHE/PCT ANMELDUNG(EN) UND JEDLICHE PRIORITÄT UNTER 35 USC 119:

Country (if PCT, indicate PCT) Land (falls PCT, PCT angeben)	Application No. Anmeldungsnummer	Date of Filing (day, month, year) Anmeldedatum (Tag, Monat, Jahr)	Priority Claimed under 35 USC 119 Priorität unter 35 USC 119 beansprucht
Germany	199 16 321.9	12 April 1999	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Ja Nein

Ich beanspruche hiermit gemäß Absatz 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 120, den Vorzug jeglicher unten aufgeführten U.S.-Anmeldung(en) oder die USA benennende internationale(n) PCT-Anmeldung(en) und falls der Gegenstand aus jedem Anspruch dieser Anmeldung nicht in dieser/diesen früheren Patentanmeldung(en) laut dem ersten Paragraphen des Absatzes 35 der Zivilprozeßordnung der Vereinigten Staaten, Paragraph 112 offenbart ist, erkenne ich gemäß Absatz 37, Bundesgesetzbuch, Paragraph 1.56(a) meine Pflicht zur Offenbarung von Informationen an, die zwischen dem Anmeldedatum der früheren Anmeldung(en) und dem nationalen oder internationalen PCT Anmeldedatum dieser Anmeldung bekannt geworden sind.

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 USC 120:

FRÜHERE AMERIKANISCHE ANMELDUNGEN ODER DIE USA BENENNENDE

INTERNATIONALE PCT-ANMELDUNGEN FÜR VORRECHT UNTER 35 USC 120

U.S. APPLICATIONS

STATUS (Check one)

U.S. Application No. U.S. Filing Date

Patented Pending Abandoned

AMERIKANISCHE ANMELDUNGEN

STAND (ein Kästchen ankreuzen)

Seriennummer

Anmeldedatum

Patentiert Anhängig Aufgegeben

< >

< >

< >

PCT APPLICATIONS DESIGNATING THE U.S.

PCT Application Number PCT Filing Date U.S.Ser.Nos.

assigned (if any)

DIE USA BENENNENDE PCT-ANMELDUNGEN

PCT-Anmelde- PCT-Anmeldedatum Zugeteilte Serien-

nummer

nummern (falls zutreffend)

< >

< >

< >

VERTRETUNGSVOLLMACHT: Als benannter Erfinder beauftrage ich hiermit den nachstehend benannten Patentanwalt (oder die nachstehend benannten Patentanwälte) und/oder Patent-Agenten mit der Verfolgung der vorliegenden Patentanmeldung sowie mit der Abwicklung aller damit verbundenen Geschäfte vor dem Patent- und Warenzeichenamt: (Name und Registrationsnummer anführen)

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

Horst M. Kasper (Reg. No. 28,559)

Richard T. Laughlin (Reg. No. 17,264)

Telefongespräche bitte richten an: (Name und Telefonnummer)
Direct Telephone Calls to: (Name and telephone number)

Borst M. Kasper (908) 757-2839

Postanschrift:

Send Correspondence to:

13 Forest Drive, Warren, N.J. 07059

Ich erkläre hiermit, daß alle von mir in der vorliegenden Erklärung gemachten Angaben nach meinem besten Wissen und Gewissen der vollen Wahrheit entsprechen, und daß ich diese eidesstattliche Erklärung in Kenntnis dessen abgebe, daß wissentlich und vorsätzlich falsche Angaben gemäß Paragraph 1001, Absatz 18 der Zivilprozeßordnung der Vereinigten Staaten von Amerika mit Geldstrafe belegt und/oder Gefängnis bestraft werden können, und daß derartig wissentlich und vorsätzlich falsche Angaben die Gültigkeit der vorliegenden Patentanmeldung oder eines darauf erteilten Patentbeschlusses gefährden können.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Voller Name des einzigen oder ursprünglichen Erfinders:

Full name of sole or first inventor:

Dirk Tillenburg

Unterschrift des Erfinders

Inventor's signature

Dirk Tillenburg

Datum

Date

12.12.2000

Wohnsitz

Residence

D-50997 Köln

Germany

DEX

